

(Entomological Series, No. 4.)

THE
AGRICULTURAL LEDGER.

1895—No. 15.

LOCUSTS.

(LOCUST CATCHERS.)

[*DICTIONARY OF ECONOMIC PRODUCTS, Vol. V., L. 510 a.*]

AN AUTOMATIC LOCUST CATCHER:

Extract from the Russian publication, 'Selskaya Khozyalstvo.'

Other *DICTIONARY* articles that may be consulted:

Insects, *Vol. IV.*, I. 328.

Pests, *Vol. VI., Pt. I.*, P. 433, No. 16 (Locusts).

Also

The Agricultural Ledger, No. 2 of 1893.



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1895.

The objects of THE AGRICULTURAL LEDGER are :—

- (1) To provide information connected with agriculture or with economic products in a form which will admit of its ready transfer to ledgers ;
- (2) To secure the maintenance of uniform ledgers (on the plan of the Dictionary) in all offices concerned in agricultural subjects throughout India, so that references to ledger entries made in any report or publication may be readily utilised in all offices where ledgers are kept ;
- (3) To admit of the circulation, in convenient form, of information on any subject connected with agriculture or economic products to officials or other persons interested therein ;
- (4) To secure a connection between all papers of interest published on subjects relating to economic products and the official Dictionary of Economic Products. With this object the information published in these ledgers will uniformly be given under the name and number of the Dictionary article which they more especially amplify. When the subject dealt with has not been taken up in the Dictionary, the position it very possibly would occupy in future issues of that work will be assigned to it.

E. C. BUCK,

Secretary to the Government of India.

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[Dictionary of Economic Products, Vol. V., L. 510 a.]

AN AUTOMATIC LOCUST CATCHER:

Extract from the Russian publication, 'Sel'skaya Khozaylu.'

Of late years the approach of spring is the signal for landowners in important districts, and especially in the Russian "Black Earth Zone," to turn their attention, not merely to the sowing of spring corn, but also to the protection of the young herbaceous plants from the ravages of the "Prüss" or Italian locust, which has done farmers so much harm of late.

Since the locust spreads very rapidly, and the struggle against him under present conditions involves much labour, it is desirable that all those whom it may concern should make known amongst landowners and peasants the few known remedies, derived from books or practical experience, which may serve to decrease the ravages of the above-named insect.

The most rational method for combating the locusts would appear to lie in the timely harrowing (to a depth of 1 vershok=1.75 inches) of the ground where the locust has deposited its eggs. This should be done in September and in March.

The application of the measure recommended is perfectly feasible inasmuch as it only necessitates the re-ploughing of those particular spots (called *Koobt-ishki*) where the eggs are likely to be found, and these can easily be determined by a careful examination of the actual ground on which the locusts had swarmed.

It would be undoubtedly desirable to provide agriculturists of the infected districts with specimens of the locust eggs, so that they might the more readily recognise them.

The female of the Italian locust, like most of the various varieties of grasshoppers, lays her eggs, as a rule, on hard, fallow, and waste land, preferring slightly raised slopes. On land only recently allowed to lie

The Italian locust.

Remedies.

Harrowing.

Laying eggs.

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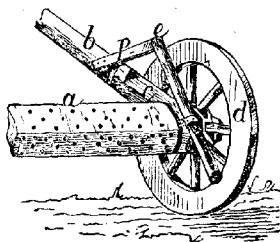
An Automatic

Killing young locusts.

fallow, these eggs will be found on the furrows separating two fields along the roadsides, and lying vertically on the surface.

As, however, this salutary measure may not be applied in many districts, and the locusts may hatch by myriads, the full-grown locusts will have to be attacked in summer, by driving them into ditches, burning, stamping and crushing them with rollers, catching them in curtains, and such-like operations.

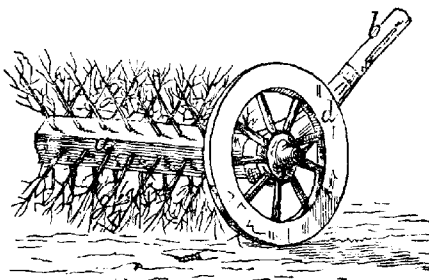
With reference to this latter phase, I wish to direct the attention of readers of this journal to a method in use in the Government of Orenburg, which has produced highly satisfactory results; this is the employment of an ordinary automatic locust catcher (Figure 1).



A locust catcher.

To construct the locust catcher: two wheels (d) are firmly fixed to the ends of a four-sided beam (a), and close to each wheel circular grooves are cut, to which the shafts are attached by means of iron bands in which the beam revolves like an ordinary axle. To the iron bands (c) and the shafts (b) are fixed pieces of timber (e), the upper ends of which are level with the tops of the wheels (d), and kept in a vertical position by the supports (p) being slightly inclined towards the horses' heads. The lower ends of these pieces project downwards to within $2\frac{1}{2}$ feet from the ground.

Between the wheels and along the beam (a) arranged checkerwise, a series of holes are drilled with a centre bit or auger about as big as one's finger, and $1\frac{3}{4}$ — $2\frac{1}{2}$ inches apart. In these holes are fixed twigs of willow or branches of any tree whatever (Figure 2). In this way the revolving beam (a) with the inserted twigs forms a broom.



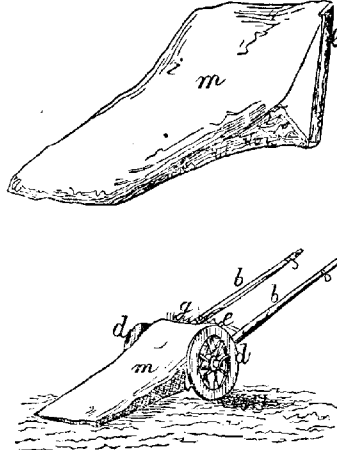
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Locust Catcher.

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To the upper and lower extremities of the timber (c) is attached the bag (m) sewn up along the sides (Figure 3) of 14—21 feet long (according to the strength of the horses) and enough to fit in between the two wheels (d), as will be clearly understood from Figure 4.

A locust
catcher.



To this simple machine one horse is harnessed, and it is dragged over the ground infected by the locust in various directions. The revolving brush thus picks up and sweeps the insects into the bag, which is very rapidly filled. The latter is then emptied into a trench or hole where the locusts are either burnt or buried.

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All communications regarding THE AGRICULTURAL LEDGER should be addressed to the Editor, Dr. George Watt, Reporter on Economic Products to the Government of India, Calcutta.

The objects of this publication (as already stated) are to gradually develop and perfect our knowledge of Indian Agricultural and Economic questions. Contributions or corrections and additions will therefore be most welcome.

In order to preserve a necessary relation to the various Departments of Government, contributions will be classified and numbered under certain series. Thus, for example, papers on Veterinary subjects will be registered under the Veterinary Series; those on Forestry in the Forest Series. Papers of more direct Agricultural or Industrial interest will be grouped according as the products dealt with belong to the Vegetable or Animal Kingdom. In a like manner, contributions on Mineral and Metallic subjects will be registered under the Mineral Series.

This sheet and the title-page may be removed when the subject-matter is filed in its proper place, according to the letter and number shown at the bottom of each page.